REMARKS/ARGUMENTS

This Request for Reconsideration is submitted in response to the Final Office Action dated May 23, 2006, and within the two month period extending from the date of the Final Office Action to July 24, 2006. Please note that July 23, 2006, is a Sunday. Therefore, the two month after-final period extends to Monday, July 24, 2006.

Claims 10-20 are cancelled per the Restriction Requirement Response filed March 25, 2005. Claims 1-9 and 21-27 are pending.

Rejections under 35 U.S.C. 102

Claims 1-8 and 22-24 were rejected under 35 U.S.C. 102(e) as being anticipated by Montierth et al. ("Montierth" hereafter) (U.S. Patent Application Publication No. 2005/0003737). These rejections are traversed.

With regard to claim 1, the Office has asserted that Montierth teaches the planar member disposed above and substantially parallel to the wafer support structure. More specifically, the Office asserts that the vibrational member 3802b of Montierth (Fig. 38) teaches the planar member of claim 1 that is positioned proximate to the wafer and serves as an upper confinement boundary for material deposited on the wafer through electroless plating reactions. The Applicants respectfully disagree with this assertion by the Office.

While the vibrational member 3802b of Montierth is depicted in Fig. 38 as being planar, the vibrational member 3802b is not disclosed as being positionable proximate to the upper surface of the wafer. Montierth (Fig. 38) simply shows the vibrational member 3802b as being fixed to the top of the chamber at a substantial distance from the substrate. Thus, Montierth (Fig. 38) does not teach that the vibrational member 3802b is capable of being positioned proximate to the wafer, as required by claim 1.

The Office has asserted that Montierth teaches variation of the wafer support, i.e., the lower vibrational member 3802a in Fig. 38, thickness to allow for positioning of the

wafer proximate to the upper vibrational member 3802b. In an attempt to support this assertion, the Office has referred to Fig. 1 of Montierth which appears to show a thicker wafer support, i.e., lower vibrational member 104, relative to the lower vibrational member 3802a. The Office has inferred that the apparent thickness difference between the lower vibrational member 104 and the lower vibrational member 3802a represents a teaching of a planar member capable of being positioned proximate to the wafer, such that the planar member serves as an upper confinement boundary for material deposited on the wafer through electroless plating reactions.

However, with respect, the Applicants submit that there is no teaching or suggestion within Montierth that the lower vibrational member 3802a thickness be adjusted to enable the upper vibrational member 3802b to be position proximate to the wafer, wherein the proximate positioning of the upper vibrational member 3802b would allow the upper vibrational member 3802b to serve as an upper confinement boundary for material deposited on the wafer through electroless plating reactions. Additionally, the Applicants submit that because the upper vibrational member 3802b of Montierth is defined to vibrate, i.e., move, the upper vibrational member 3802b does not define an upper confinement boundary for material deposited on the wafer through electroless plating reactions.

The Office has further asserted that Montierth teaches the radiant energy source of claim 1. Specifically, the Office has asserted that the adjacent piezoelectric crystals 3804 of Fig. 38 teach the radiant energy source of claim 1. However, Montierth (particularly [0483]) teaches the piezoelectric crystals 3804 as representing a source of "vibrational energy." As is well known in the art, piezoelectric crystals 3804 vibrate at a frequency that is a function of the electric voltage applied thereto. Vibrational energy of the piezoelectric crystals 3804 is transmitted mechanically to surrounding media, such as the upper vibrational member 3802b and the fluid interfacing therewith. The Applicants

submit that it is not appropriate to interpret "radiant energy," as claimed, as "vibrational energy." Thus, the Applicants respectfully submit that Montierth does not teach the "radiant energy source" required by claim 1.

As the Office is aware, a claim is anticipated under 35 U.S.C. 102 only when each and every feature of the claim is taught by a single prior art reference. Due to at least the foregoing reasons, the Applicants submit that Montierth fails to teach each and every feature of claim 1. Therefore, the Applicants submit that Montierth does not anticipate claim 1 under 35 U.S.C. 102.

Because independent claims 22 and 24 include essentially the same planar member and radiant energy source features as claim 1, the Applicants submit that each of claims 22 and 24 is not anticipated by Montierth for at least the same reasons as discussed above with respect to claim 1. Also, with regard to claim 24, Montierth does not teach the backing member configured to control a planarity of the planar member. The Office has asserted that the adjacent piezoelectric crystals 3804 of Montierth (Fig. 38) teach the backing member of claim 24. However, the piezoelectric crystals 3804 are not disclosed by Montierth as having the ability to control the planarity of the upper vibrational member 3802b. Furthermore, the separated nature of the adjacent piezoelectric crystals 3804 of Montierth as dispersed across the top of the upper vibrational member 3802b does not infer a teaching that the piezoelectric crystals 3804 are capable of controlling the planarity of the upper vibrational member 3802b.

In view of the foregoing, the Applicants submit that claims 1, 22, and 24 are not anticipated by Montierth under 35 U.S.C. 102. Additionally, because each of dependent claim includes all features of its respective independent claim, the Applicants further submit that each of dependent claims 2-9, 21, 23, and 25-27 is patentable for at least the same reasons as its respective independent claim. Based on the foregoing, the Office is

kindly request to withdraw the rejections of claims 1-8 and 22-24 under 35 U.S.C. 102 based on Montierth.

Claims 1-7, 22, and 24 were rejected under 35 U.S.C. 102(b) as being anticipated by Sandaiji et al. ("Sandaiji" hereafter) (U.S. Patent No. 4,982,065). These rejections are traversed.

The Applicants submit that Sandaiji does not teach the planar member of claims 1, 22, and 24, wherein the planar member is capable of being positioned proximate to the wafer and capable of serving as an upper confinement boundary for material deposited on the wafer through electroless plating reactions. Sandaiji is concerned with removal of material from a gapped bar through an etching process. Sandaiji is not concerned with deposition of materials, particular deposition of material on a wafer through electroless plating reactions. The Office has asserted that the apparatus of Sandaiji is capable of being used for a material deposition process in addition to the discussed etching process, even though Sandaiji is silent with regard to such a material deposition process. Therefore, the assertion that the quartz window 7 of Sandaiji is capable of being positioned proximate to the wafer and serving as an upper confinement boundary for material deposited on the wafer through electroless plating reactions, represents an extrapolation of the actual apparatus teachings of Sandaiji. In other words, Sandaiji does not teach or suggest that the quartz window 7 is defined to being positioned proximate to the wafer and serve as an upper confinement boundary for material deposited on the wafer through electroless plating reactions. Also, there is no teaching in Sandaiji that the level adjustment mechanism 6 is capable of positioning the quartz window 7 proximate to the wafer, such that the quartz window 7 provides an upper confinement boundary for material deposited on the wafer through electroless plating reactions.

Further with regard to claim 22, Sandaiji does not teach the radiant energy source oriented to direct radiant energy through the planar member such that a substantially

uniform amount of radiant energy is applied to the top surface of the wafer. Rather, Sandaiji teaches a laser beam 8 emitted from a laser source 9 and irradiated through a lens system 10 and the quartz window 7 onto the gapped bar 4. Sandaiji further teaches that the diameter of the laser beam is on the order of tens of micrometers. The laser of Sandaiji is not capable of applying a substantially uniform amount of radiant energy to the top surface of the wafer. The laser of Sandaiji is defined to apply radiant energy to the gapped bar at specific locations corresponding to a desired pattern to be etched on the gapped bar. Furthermore, if the laser of Sandaiji were to somehow be applied of the entire top surface of the gapped bar, the entire top surface of the gapped bar would be etched, thus, rendering the apparatus of Sandaiji inoperable with respect to etching a specific pattern in the top surface of the gapped bar.

Further with regard to claim 24, Sandaiji does not teach the backing member disposed against the backside of the planar member, wherein the backing member is defined to control the planarity of the planar member. The Office has referred to the lens system 10 of Sandaiji as teaching the backing member of claim 24. However, because the lens system 10 of Sandaiji has no physical contact with the quartz window 7, it is not reasonable to conclude that the lens system 10 is capable of controlling the planarity of the quartz window 7. Additionally, Sandaiji does not teach that the lens system 10 is defined to control the planarity of the quartz window 7. Therefore, the Applicants submit that Sandaiji simply does not teach the backing member of claim 24.

Due to at least the foregoing reasons, the Applicants submit that Sandaiji fails to teach each and every feature of each of claims 1, 22, and 24. Therefore, the Applicants submit that Sandaiji does not anticipate each of claims 1, 22, and 24 under 35 U.S.C. 102. Additionally, because each dependent claim includes all features of its respective independent claim, the Applicants submit that each of dependent claims 2-9, 21, 23, and 25-27 is patentable for at least the same reasons provided for its respective independent

claim. Based on the foregoing, the Office is kindly request to withdraw the rejections of claims 1-7, 22, and 24 under 35 U.S.C. 102 based on Sandaiji.

Rejections under 35 U.S.C. 103

Claims 1-7, 22, and 24 were rejected under 35 U.S.C. 103(a) as being obvious over Sandaiji. These rejections are traversed.

Sandaiji teaches an apparatus for performing a laser-induced etching process on a gapped bar material to form grooves or holes on a surface of the gapped bar. Specifically, Sandaiji teaches that the gapped bar is positioned in a phosphoric acid aqueous solution or an alkali metal hydroxide aqueous solution. Then, the gapped bar is irradiated by a laser beam having a predetermined power and a predetermined scanning speed. The laser beam induces an etching chemical reaction at the point of incidence with the gapped bar in the aqueous solution. As the laser beam is applied to the gapped bar, the gapped bar is moved relative to the laser beam such that a precise track is etched within the gapped bar.

Because the etching process as taught by Sandaiji is defined to remove material from a surface, the Applicants submit that the etching process and associated apparatus of Sandaiji is not related to material deposition. The method and associated apparatus of Sandaiji is not concerned with deposition of materials. More specifically, Sandaiji does not teach "an apparatus for depositing a planarizing layer over a wafer," as recited in claim 1. The Applicants submit that a person of skill in the art, at the time of the invention, concerned with deposition of a planarization layer on a wafer through electroless plating reactions, would not have looked to Sandaiji for relevant teachings. Sandaiji does not include a teaching or suggestion that the apparatus disclosed therein has application in the process of depositing material on a semiconductor wafer through electroless plating reactions. "In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or,

if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992).

The Office has further asserted that it is inherent that the apparatus of Sandaiji be used for electrochemical planarization of a wafer. "To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Applicants respectfully submit that the Office has not provided a basis in fact and/or technical reasoning that supports a determination that configuration of the apparatus of Sandaiji for electroless plating of a wafer to define a planarizing layer thereon is an "inherent" teaching within Sandaiji.

In addition to the foregoing, the Applicants submit that Sandaiji fails to teach each and every feature of claims 1, 22, and 24. The Office is requested to refer to the above discussion regarding the rejections under 35 U.S.C. 102, for the explanation of how Sandaiji fails to teach each and every feature of claims 1, 22, and 24, respectively. As the Office is aware, for a claim to be rendered prima facie obvious under 35 U.S.C. 103, each and every feature of the claim must be taught or suggested by the cited art of record. Because Sandaiji does not teach each and every feature recited therein, the Applicants submit that each of claims 1, 22, and 24 is not rendered prima facie obvious by Sandaiji. Additionally, because each dependent claim includes all features of its respective independent claim, the Applicants submit that each of dependent claims 2-9, 21, 23, and

25-27 is patentable for at least the same reasons provided for its respective independent claim. Based on the foregoing, the Office is kindly request to withdraw the rejections of claims 1-7, 22, and 24 under 35 U.S.C. 103 based on Sandaiji.

Claim 9 was rejected under 35 U.S.C. 103(a) as being unpatentable over Montierth in view of Mayer et al. ("Mayer" hereafter) (U.S. Patent No. 5,096,550). This rejection is traversed.

Dependent claim 9 incorporates the features of independent claim 1 from which it depends. Therefore, the Applicants respectfully submit that claim 9 is patentable for at least the same reasons as claim 1. The Office is kindly requested to withdraw the rejection of claim 9.

Claims 21 and 25 were rejected under 35 U.S.C. 103(a) as being unpatentable over Montierth. These rejections are traversed.

Each of dependent claims 21 and 25 incorporates the features of independent claims 1 and 24, respectively. Therefore, the Applicants respectfully submit that each of claims 21 and 25 is patentable for at least the same reasons as claims 1 and 24, respectively. The Office is kindly requested to withdraw the rejections of claims 21 and 25.

Claim 26 was rejected under 35 U.S.C. 103(a) as being unpatentable over Montierth as applied to claim 25 above, and further in view of Barringer et al. ("Barringer" hereafter) (U.S. Patent No. 6,496,001). This rejection is traversed.

Dependent claim 26 incorporates the features of independent claim 24 from which it depends. Therefore, the Applicants respectfully submit that claim 26 is patentable for at least the same reasons as claim 24. The Office is kindly requested to withdraw the rejection of claim 26.

Claim 27 was rejected under 35 U.S.C. 103(a) as being unpatentable over Montierth as applied to claim 25 above, and further in view of Zuniga et al. ("Zuniga"

hereafter) (U.S. Patent Application Publication No. 2004/0192173). This rejection is traversed.

Dependent claim 27 incorporates the features of independent claim 24 from which it depends. Therefore, the Applicants respectfully submit that claim 27 is patentable for at least the same reasons as claim 24. The Office is kindly requested to withdraw the rejection of claim 27.

Claims 8 and 9 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sandaiji in view of Ballantine et al. ("Ballantine" hereafter) (U.S. Patent No. 6,699,400). These rejections are traversed.

Each of dependent claims 8-9 incorporates the features of independent claim 1. Therefore, the Applicants respectfully submit that each of claims 8-9 is patentable for at least the same reasons as claim 1. The Office is kindly requested to withdraw the rejections of claims 8-9.

Claim 21 was rejected under 35 U.S.C. 103(a) as being unpatentable over Sandaiji. This rejection is traversed.

Dependent claim 21 incorporates the features of independent claim 1. Therefore, the Applicants respectfully submit that claim 21 is patentable for at least the same reasons as claim 1. The Office is kindly requested to withdraw the rejection of claim 21.

Claim 23 was rejected under 35 U.S.C. 103(a) as being unpatentable over Sandaiji in view of Bjornson et al. ("Bjornson" hereafter) (U.S. Patent No. 6,900,889). This rejection is traversed.

Dependent claim 23 incorporates the features of independent claim 22. Therefore, the Applicants respectfully submit that claim 23 is patentable for at least the same reasons as claim 22. The Office is kindly requested to withdraw the rejection of claim 23.

The Applicants respectfully submit that all of the pending claims are in condition for allowance. Therefore, a Notice of Allowance is requested. If the Examiner has any questions concerning the present Request for Reconsideration, the Examiner is kindly requested to contact the undersigned at (408) 774-6914. Also, if any additional fees are due in connection with filing this Request for Reconsideration, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P461). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,
MARTINE PENILLA & GENCARELLA, LLP

Kenneth D. Wright
Reg. No. 53,795

Martine Penilla & Gencarella, LLP
710 Lakeway Drive, Suite 200
Sunnyvale, California 94086
Tel: (408) 749-6900
Customer Number 25920